

**MDA970A1  
thru  
MDA970A6**

**Designers Data Sheet**

**INTEGRAL DIODE ASSEMBLIES**

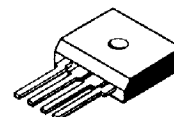
... diffused silicon dice interconnected and transfer molded into rectifier circuit assemblies for use in application where high output current/size ratio is of prime importance. These devices feature:

- Void-free, Transfer-molded Encapsulation to Assure High Resistance to Shock, Vibration, and Temperature Extremes
- High Dielectric Strength
- Simple, Compact Structure for Trouble-free Performance
- High Surge Capability — 100 Amps

**Designers Data for "Worst Case" Conditions**

The Designers Data Sheet permits the design of most circuits entirely from the information presented. Limit curves — representing boundaries on device characteristics — are given to facilitate "worst case" design.

**SINGLE-PHASE  
FULL-WAVE BRIDGE**  
  
**4 AMPERES  
50-600 VOLTS**



**MAXIMUM RATINGS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Rating	Symbol	MDA970A1	MDA970A2	MDA970A3	MDA970A5	MDA970A6	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	50	100	200	400	600	Volts
RMS Reverse Voltage	$V_R(\text{RMS})$	35	70	140	280	420	Volts
DC Output Voltage Resistive Load Capacitive Load	$V_{dc}$ $V_{dc}$	31 50	62 100	124 200	248 400	372 600	Volts
Average Rectified Forward Current $T_A = 25^\circ\text{C}$ $T_C = 55^\circ\text{C}$	$I_O$						Amp
Nonrepetitive Peak Surge Current (surge applied at rated load conditions, $T_J = 150^\circ\text{C}$ )	$I_{FSM}$	100					Amp
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-65 to +150					$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

Characteristics	Symbol	Max (Per Die)	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	10	$^\circ\text{C/W}$
Effective Bridge	$R_{\theta(EFF)}$	7.75	$^\circ\text{C/W}$

**ELECTRICAL CHARACTERISTICS**

Characteristic	Symbol	Min	Max	Unit
Instantaneous Forward Voltage (Per Diode) ( $I_F = 6.28 \text{ Amp}, T_J = 25^\circ\text{C}$ )	$V_F$	—	1.1	Vdc
( $I_F = 6.28 \text{ Amp}, T_J = 150^\circ\text{C}$ )		—	1.0	
Reverse Current (Rated $V_{RM}$ applied to ac terminals, + and - terminals open, $T_A = 25^\circ\text{C}$ )	$I_R$	—	1.0	mA

CASE: Transfer-molded plastic encapsulation.

FINISH: All external surfaces are corrosion-resistant. Leads are readily solderable.

POLARITY: Embossed symbols

AC input = ~

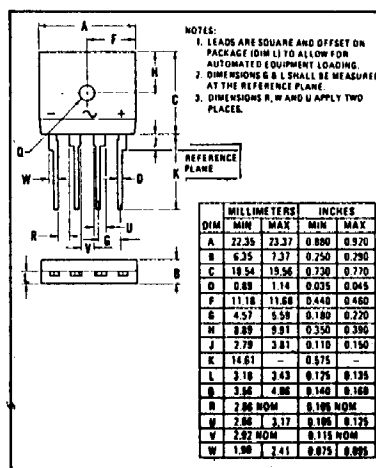
DC output = +

DC output = -

MOUNTING POSITION: Any

WEIGHT (Approximately): 7.5 Grams

MOUNTING TORQUE: 5 in.-lb. Max



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